

III. REMARKS

Claims 1, 4-11, and 13-20 are pending in this application. Claims 1, 11, and 17 have been amended herein. Applicants are not conceding in this application that those claims are not patentable over the art cited by the Examiner, as the present claim amendments and cancellations are only for facilitating expeditious allowance of the claimed subject matter. Applicants respectfully reserve the right to pursue these and other claims in one or more continuation and/or divisional patent applications. Reconsideration in view of the following remarks is respectfully requested.

In the Office Action, claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nitta *et al.* (US Pub. No. 2001/0054764, hereinafter “Nitta”). Applicants respectfully traverse this rejection, as Nitta fails to teach each and every element of the claimed invention.

Specifically, with respect to claim 1, as previously argued in the response of June 5, 2007, Nitta fails to teach a method of forming a gas dielectric structure for a semiconductor structure, including the feature of “forming an opening for semiconductor structure in a dielectric layer on a substrate, wherein the opening includes both a wiring opening and a via opening” (claim 1, lines 3-4, as amended herein). In the current Action, the Office indicates that “opening 13 of Nitta does not preclude a via opening” (Office Action, p. 8). Applicants respectfully submit that while Nitta does not *preclude* a via opening, it also does not *teach* a via opening. Therefore, because Nitta does not teach the claimed feature, Nitta is not a proper reference to form the basis of such a rejection under § 102(b). Applicants further submit that the Office’s remark that “Nitta is not relied on for what it strongly suggests or what it does not contemplate”

makes little sense in context. Clearly, if Nitta is to be the basis of a rejection under § 102(b), Nitta *must* be relied on for what it *does* contemplate.

As noted, Applicants submit that a via “wherein the via provides a vertical connection to an interconnect line” as recited in the claimed invention (as amended herein) is not among the features contemplated by Nitta. Instead, at FIGS. 6A-D and corresponding paragraphs 72-79, as well as the balance of the disclosure, Nitta teaches an element “13,” which is labeled as a “wiring pattern groove.” This “wiring pattern groove” in no case actually extends through the full depth of the silicon oxide film (12). Applicants accordingly maintain that Nitta does not contemplate a process that forms both a wire opening and a via opening as claimed, as Nitta fails to disclose a vertical connection between stacked interconnect metal lines.

Applicants further assert that Nitta fails to teach or suggest the feature of “wherein the void extends along a side of the at least one via” (Office Action, p. 3, quoting claim 1, line 14). In fact, at p. 4, the Office admits with respect to claims 11 and 17 that “Nitta ... fails to explicitly disclose ... an opening including a wiring opening and a via opening in a dielectric layer on a substrate,” a limitation which Applicants submit is substantively analogous to the above-quoted limitation of claim 1. Again referring to FIGS. 6A-D in Nitta, wiring pattern groove 13 does not teach a via, because groove 13 lacks the requisite depth, and there is no interconnect line either depicted or mentioned in text to which the via could connect even if it had been etched to the depth of the substrate layer (11). Further, Nitta arguable teaches away from a via alongside which a void extends, because FIGS. 6A-D lack stacked up metal interconnect lines between which a via would be at all useful to provide a vertical connection. Accordingly, Applicants submit that it is impossible for Nitta to disclose “wherein the void extends along a side of the at least one via,” a position that Applicants submit is supported by the fact that the Office provides

no references to features in Nitta which either implicitly or explicitly disclose the claimed features.

On the basis of these remarks, Applicants submit that Nitta fails to teach each and every feature of the claimed invention, and accordingly request withdrawal of the rejection under § 102(b). With respect to dependent claim 7, Applicants submit that the subject matter recited therein is allowable for the same reasons stated above, as well as for its own additional features.

In the Office Action, claims 4-6, 8-11, and 13-20 are rejected under 35 U.S.C. § 103(a). Claims 4-5, 11, 13, 15, 17, and 19 are rejected as being unpatentable over Nitta in view of Cooney (US Pub. No. 2004/0018714); claim 8 as being unpatentable over Nitta in view of Parekh (US Pat. No. 6,214,727); claims 16 and 20 as being unpatentable over Nitta in view of Cooney and further in view of Parekh; claims 6, 11, 14, 17, and 18 as being unpatentable over Nitta in view of Tsai (US Pub. No. 2003/0077897); and claims 9-10 as being unpatentable over Nitta in view of Te Velde (US Pat. No. 4,561,173).

With respect to claims 11 and 17, Applicants submit that the rejections under § 103(a) over Nitta and Cooney and over Nitta and Tsai each rely on Nitta to teach the features described above relative to the rejections under § 102(b), specifically, the feature of “wherein the void extends along a side of the at least one via.” Because, as discussed above, Nitta fails to teach those features, Applicants respectfully submit that the rejections under § 103(a) are defective, and accordingly, request their withdrawal.

With respect to dependent claims 4-6, 8-10, 13-16, and 18-20, Applicants respectfully submit that these claims are allowable for reasons elucidated above relative to the independent claims, as well as for their own additional claimed subject matter. Accordingly, Applicants

respectfully request that the Office withdraw the rejections under 35 U.S.C. § 103(a) to claims 4-6, 8-10, 13-16, and 18-20.

IV. CONCLUSION

Applicants respectfully submit that the Application as presented is in condition for allowance. Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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